

CLAIMS

1 1. A certification authority for generating certificates in response to respective certification requests,
2 the certification authority comprising:

3 A. a computer that is bootable from a removable medium; and

4 B. a removable medium comprising a machine readable medium having encoded thereon:

5 i. an operating system module configured to enable the computer to boot from the
6 removable medium; and

7 ii. a certificate generation module configured to, after the computer has been booted,
8 control the computer to facilitate the generation of at least one certificate in response
9 to an associated certificate request, the certification authority module being
10 configured to provide that the computer not be remotely controlled during a
11 certificate generation session.

12 2. A certification authority as defined in claim 1 in which said certification authority operates under
13 control of an operator, the certificate generation module enabling the computer to display certificate
14 request information associated with the certificate request to the operator and receive operator input
15 information from an operator, the certificate generation module enabling the computer to use the
16 input information from the operator in generating the at least one certificate.

17 3. A certification authority as defined in claim 2 in which the operator input information includes
18 operator authentication information, the certification generation module including an authentication

3 module configured to enable the computer to receive the operator authentication information and
4 verify that the operator is authorized to control the certification authority.

1 4. A certification authority as defined in claim 3 in which the certificate includes an digital signature
2 comprising a signature that is generated using private encryption key, the certificate generation
3 module including

4 A. an encrypted private key;

5 B. a decryption module configured to enable the computer to use the operator authentication
6 information to decrypt the encrypted private key thereby to obtain a private key; and

7 C. a digital signature module configured to enable the computer to generate a digital signature
8 from information in the at least one certificate using the private key.

1 5. A certification authority as defined in claim 2 in which the certificate generation module further
2 enables the operator to receive operator input information relating to information in the certificate
3 request, the certificate generation module further including:

4 A. a certification request information display module configured to enable the computer to
5 display certification information to the operator; and

6 B. a certification request edit module configured to enable the computer to receive cert request
7 modification information from the operator and update information in the certificate request
8 in response thereto.

1 6. A certification authority as defined in claim 2 in which the certificate generation module further
2 includes a certification request approval module configured enable the computer to receive operator
3 input information comprising a certificate request approval and generate the certificate request in
4 response thereto.

1 7. A certification authority as defined in claim 1 in which information in a certification request is in
2 a predetermined format, the certificate generation module further including a certification request
3 verification module configured to enable said computer to determine whether the information in the
4 at least one certification request is in the predetermined format.

1 8. A certification authority as defined in claim 1 in which the computer is connected to retrieve
2 certification requests from a remote storage location, the certificate generation module further
3 including a communication control module configured to enable the computer to retrieve
4 certification requests from the remote storage location.

1 9. A computer program product for use in connection with a computer to form a certification
2 authority for generating certificates in response to respective certification requests, the computer
3 being bootable from a removable medium, the computer program product comprising a removable
4 medium in the form of a machine readable medium having encoded thereon:

5 A. an operating system module configured to enable the computer to boot from the removable
6 medium; and

7 B. a certificate generation module configured to, after the computer has been booted, control
8 the computer to facilitate the generation of at least one certificate in response to an associated

9 certificate request, the certification authority module being configured to provide that the
10 computer not be remotely controlled during a certificate generation session.

1 10. A computer program product as defined in claim 9 in which said certification authority operates
2 under control of an operator, the certificate generation module enabling the computer to display
3 certification request information associated with the certification request to the operator and receive
4 operator input information from an operator, the certificate generation module enabling the computer
5 to use the input information from the operator in generating the at least one certificate.

11. A computer program product as defined in claim 10 in which the operator input information
includes operator authentication information, the certificate generation module including an
authentication module configured to enable the computer to receive the operator authentication
information and verify that the operator is authorized to control the certification authority.

12. A computer program product as defined in claim 11 in which the certificate includes a signature
comprising a signature that is encrypted using a private encryption key, the certificate generation
module including

- 4 A. an encrypted private key;
- 5 B. a decryption module configured to enable the computer to use the operator authentication
6 information to decrypt the encrypted private key thereby to obtain a private key; and
- 7 C. a digital signature module configured to enable the computer to generate a digital signature
8 from information in the at least one certificate and encrypt the digital signature using the
9 private key.

1 13. A computer program product as defined in claim 10 in which the certificate generation module
2 further enables the operator to receive operator input information relating to information in the
3 certification request, the certificate generation module further including:

- 4 A. a certification request information display module configured to enable the computer to
5 display certification information to the operator; and
6 B. a certification request edit module configured to enable the computer to receive certification
7 request modification information from the operator and update information in the
8 certification request in response thereto.

9 14. A computer program product as defined in claim 10 in which the certificate generation module
10 further includes a certification request approval module configured enable the computer to receive
11 operator input information comprising a certification request approval and generate the certificate
12 in response thereto.

13 15. A computer program product as defined in claim 9 in which information in a certification request
14 is in a predetermined format, the certificate generation module further including a certification
15 request verification module configured to enable said computer to determine whether the information
16 in the at least one certification request is in the predetermined format.

17 16. A computer program product as defined in claim 9 in which the computer is connected to retrieve
18 certification requests from a remote storage location, the certificate generation module further

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